MINOX

35 GT

Type 10750

Ersatzteile

Reparatur

Spare Parts

Repairs

Pièces de rechange

Réparation

Repuestos

Reparación

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Telex 482986 minox d

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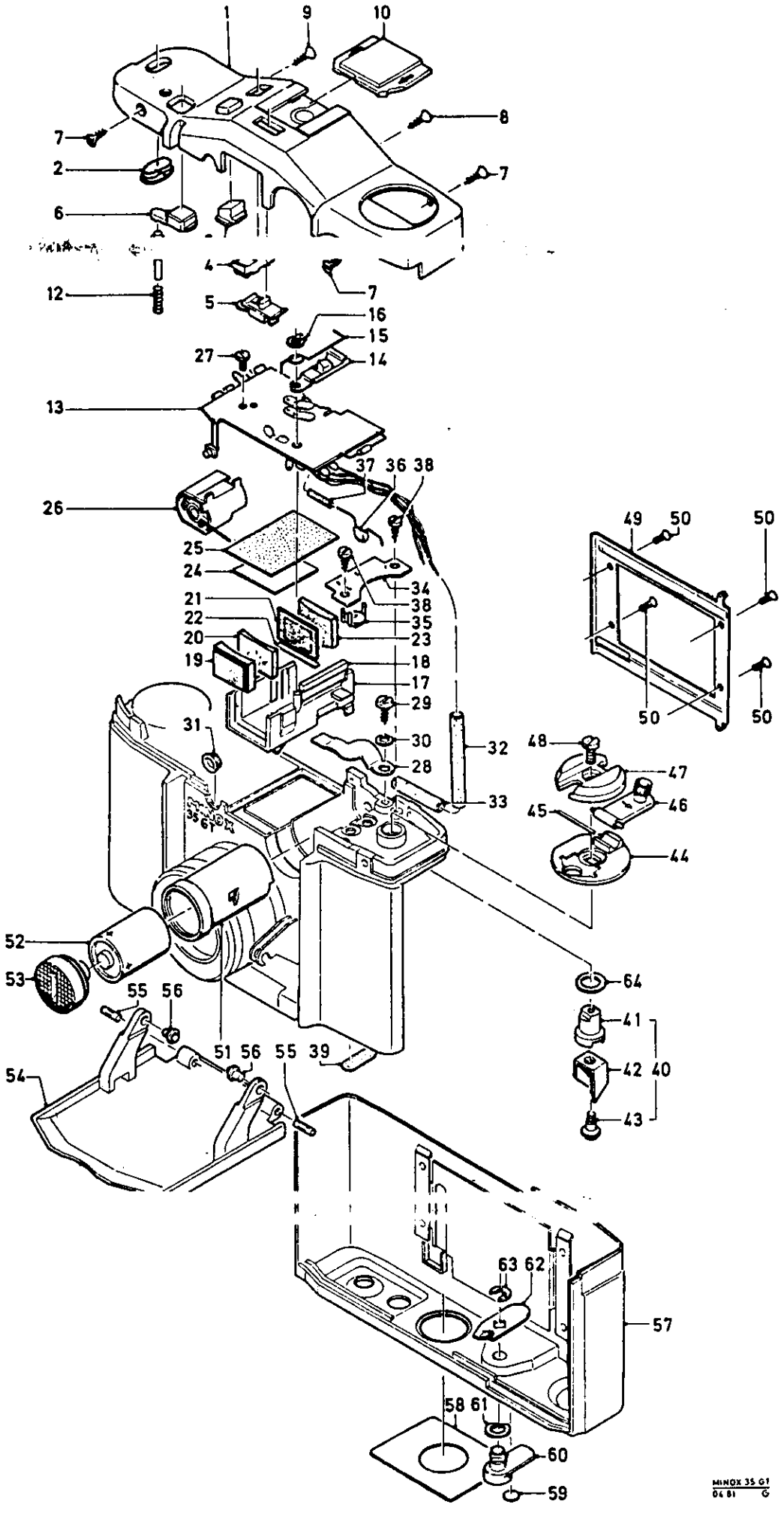
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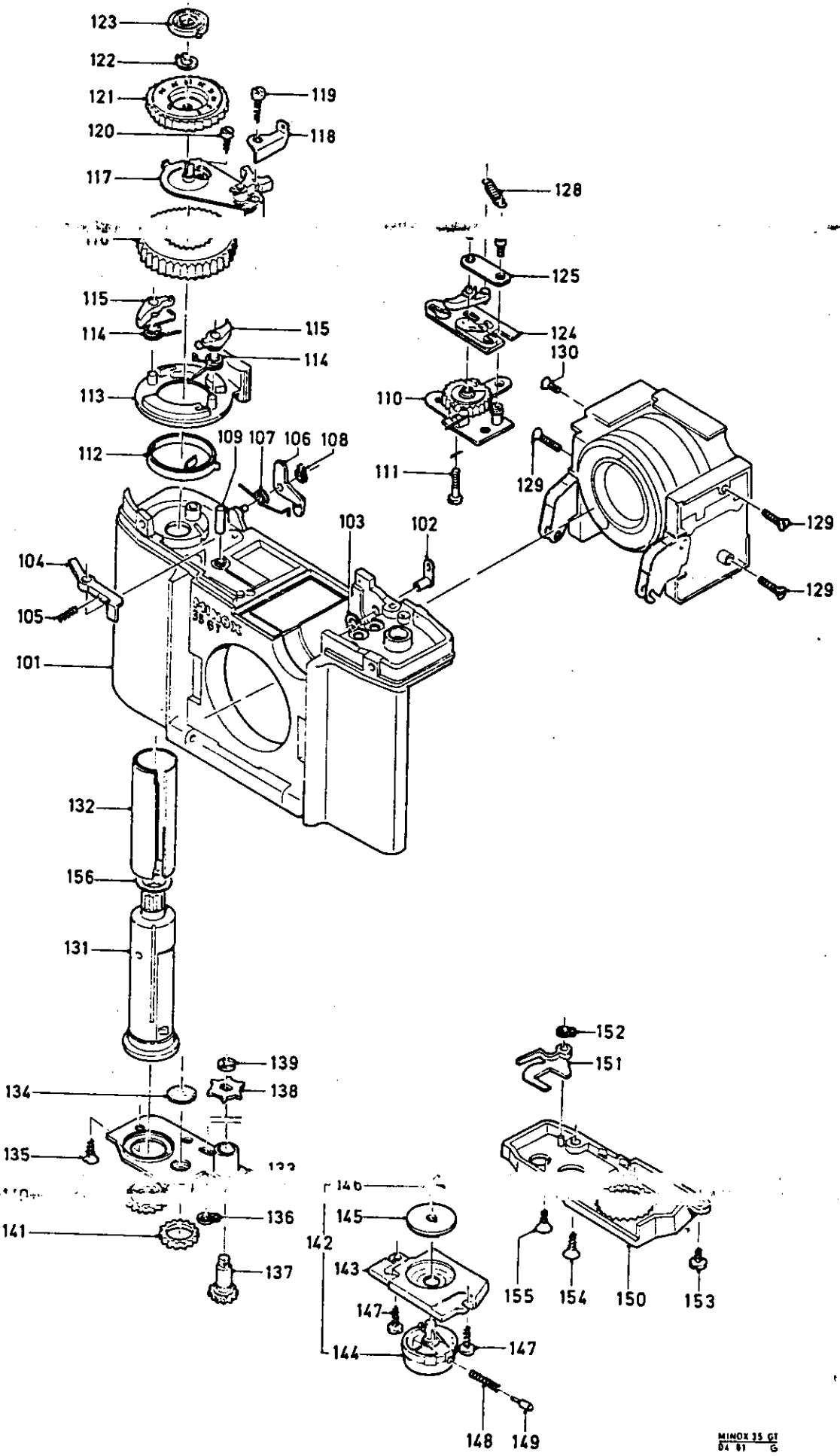
Bild-Nr. Fig. no.	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr./Part no./ No. de piece / No de pieza
1	1	Body cap, mounted	10750 38000
2	1	. Frame counter window	10750 38002
3	1	. Push-button	10850 38022
4	1	Sliding switch 2 x complete	10850 46000
5	1	Sliding switch T, complete	10750 47000
6	1	Shutter release button, yellow	10750 40001
7	1	Screw, countersunk machine Bg 1.6 x 2.5 mm	10800 40003
	S	Screw, countersunk machine M 2 x 2.5 mm	00000 30080
8	1	Screw, countersunk machine Bg 1.6 x 4 mm	10800 40004
9	1	Screw, countersunk machine M 1.4 x 2.5 mm	10750 12048
10	1	Cover slide	10750 00003
11	1	Shutter release pin	10750 03001
12	1	Shutter release spring	10800 03002
13	1	Printed circuit board, complete	10750 19000
14	1	. Flash switch, complete	10720 17000
15	1	. Leg spring	10750 17002
16	1	. Retainer ring G 2.0	00000 31072
17	1	. Viewfinder, complete	10750 20000
18	1	. . Sealing strip	10750 18017
19	1	. . Front lens element I	10800 18111
20	1	. . Front lens element II	10800 18002
21	1	. . Viewfinder mask	10750 18004
	(1)	. . Viewfinder mask (only use in combination with part/fig.22)	10800 18004
22	(1)	. . Adhesive tape	00000 40891
23	1	. . Eyepiece	10800 18113
24	1	. . Viewfinder cover	10750 18008
25	1	. . Adhesive tape	10800 18007
[illegible]	[illegible]	[illegible]	10800 16102
27	1	Screw, fillister, recessed head M 1.4 x 2 mm	00000 30131
	(1)	Screw, fillister M 1.4 x 2 mm	00000 30098
28	1	Retaining clip	10750 12009

Bild-Nr Fig no	Stck qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr./Part no / No. de piece / No de pieza
29	1	Screw, fillister Bg 2.2 x 4 mm	00000 30136
	(1)	Screw, fillister Bg 2.2 x 4.5 mm	00000 20184
30	(1)	Disc 3.8 ø x 2.4 ø x 0.5 mm	00000 31008
31	1	Socket for LED	10750 16007
[illegible]	[illegible]	[illegible]	[illegible]
33	1	Insulating tubing, short	10800 12037
34	1	Backing plate, complete	10750 21000
35	1	. Trim resistor 10 kOhm	00000 36324
36	1	. Resistor 4.7 kOhm	00000 36380
37	1	. Insulating tubing	10800 21002
38	2	Screw, fillister Bg 2 x 3 mm	00000 30110
39	1	Cover disc	10750 40005
40	1	Spool take-up cam, complete	10800 14000
41	1	. Spool take-up cam	10800 14001
42	1	. Take-up cam clip	10800 14002
43	1	. Screw, shoulder	10800 14003
44	1	Rewind cam *	10750 12124
	(1)	Rewind cam *	10750 12024
	1	Light-trap plate	10730 12001
45	1	Stop spring *	10750 13101
	(1)	Stop spring *	10750 13001
46	1	Crank arm, complete	10750 11000
47	1	Rewind cam cover	10750 12026
48	1	Screw, fillister M 2 x 4 mm	00000 20183
49	1	Film feed, complete	10750 39000
50	4	Screw, countersunk machine ■ M 1.4 x 2.5mm	00000 30099
51	1	Battery tube	10800 12106
52	(1)	Battery Varta 7150 Ucar EPX 27 Mallory PX 27	
53	1	Battery cover, complete	10800 45000
[illegible]	[illegible]	[illegible]	[illegible]
55	2	Grooved alignment pin 2 ø x 6 mm	00000 34037
56	2	Latch pin	10800 26016
57	1	Body back, complete **	10750 43100
	(1)	Body back, complete **	10750 43000
58	1	. DIN/ASA label	10850 43002

* In this connection please observe the Service Bulletin no. 2, Point 6.

** In this connection please observe the Service Bulletin no. 2, Point 7.

Bild-Nr Fig. no.	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr. / Part no. / No. de piece / No de pieza
59	1	. Indicator disc	10800 43006
60	1	. Lock	10850 43001
61	1-2	. Spring washer	10800 43005
62	1	. Lock plate	10800 43003
[illegible]	[illegible]	[illegible]	[illegible]
64	(1)	Disc 7.3 ø x 5.05 ø x 0.05 mm	00000 31030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MINOX 35 GT
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Bild-Nr Fig. no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr. / Part no. / No. de piece / No de pieza
101	1	Body, riveted	10750 01000
102	1	. Negative contact	10800 01005
103	1	. Rivet solder tag	00000 33021
104	1	Shutter release block	10800 12007
106	1	Re-set latch	10800 12010
107	1	Torsion spring	10800 12011
108	1	Retainer ring G 1.5	00000 31071
109	1	Winder pin	10800 26001
110	1	Base plate	10850 02000
111	1	Screw, fillister M 1.4 x 6.4 mm	10800 12044
112	1	Torsion spring	10750 12041
113	1	Conical spring washer	10750 12040
114	2	Torsion spring	10800 12043
115	2	Tension latch	10800 12042
116	1	Winder wheel	10800 12012
117	1	Bottom plate	10850 06000
118	1	Angle bracket	10750 12046
119	1	Screw, fillister Bg 2 x 7.8 mm	10800 12027
	(1)	Screw, fillister Bg 1.9 x 7.8 mm	00000 30140
	S	Screw, fillister M 2.3 x 8 mm	00000 30127
120	1	Screw, fillister Bg 2 x 3.5 mm	00000 30090
121	1	Film counter wheel	10750 12019
122	1	Retainer ring G 2.0	00000 31072
123	1	Flat spiral spring	10800 12020
124	1	Sliding switch, complete	10850 10000
125	1	Guide plate	10800 12016
126	1	Lining	10800 12017
127	1	Screw, fillister M 1.4 x 2 mm	00000 30131
	(1)	Screw, fillister M 1.4 x 2 mm	00000 30098
128	1	Tension spring	10800 12018
129	3	Screw, countersunk machine M 1.6 x 4.5 mm	00000 30126
130	1	Screw, countersunk machine M 1.6 x 3.5 mm	00000 30089

S = Substitute

Bild-Nr Fig no	Stck qty	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr./Part no./No. de piece/No de pieza
131	1	Sleeve, complete	10850 30200
132	1	Expansion tube	10850 36002
133	1	Drive plate *	10750 36106
	(1)	Drive plate *	10750 36006
[illegible]	[illegible]	[illegible]	[illegible]
	1	Sealing washer	00000 31150
135	1	Screw, countersunk machine Bg 1.6 x 2.5 mm	10750 36020
136	1	Retainer ring G 2.0	00000 31072
137	1	Cogwheel with shoulder	10750 36003
138	1	Film transport wheel	10750 36104
139	1	Retainer washer 1.9	00000 21084
140	1	Transfer wheel	10800 36209
141	1	Idler wheel	10850 36018
142	1	Resistor plate, complete	10750 35000
143	1	. Resistor plate	10750 34000
144	1	. Adjusting knob, complete	10850 32000
145	1	. Catch plate, complete	10850 33000
146	1	. Retainer ring G 2.0	00000 31072
147	2	Screw, fillister Bg 1.4 x 3.5 mm	00000 30122
	S	Screw, fillister M 1.7 x 3.5 mm	00000 30117
148	1	Pressure spring	10850 36010
149	1	Latch pin	10850 36016
150	1	Drive cover, complete	10850 37000
151	1	. Sliding lock	10800 36131
152	1	. Retainer ring G 1.5	00000 31071
153	1	Screw, fillister Bg 2 x 2.8 mm	10800 12028
	S	Screw, fillister M 2.3 x 3 mm	00000 30088
154	1	Screw, countersunk machine Bg 2 x 5 mm	10800 36014
	S	Screw, countersunk machine M 2 x 6 mm	00000 20113
155	1	Screw, countersunk machine [illegible]	[illegible]
156	(1)	Disc 9.5 ø x 6.9 ø x 0.3 mm	00000 31142

* In this connection please observe the Service Bulletin no. 2, Point 7.

S = Substitute

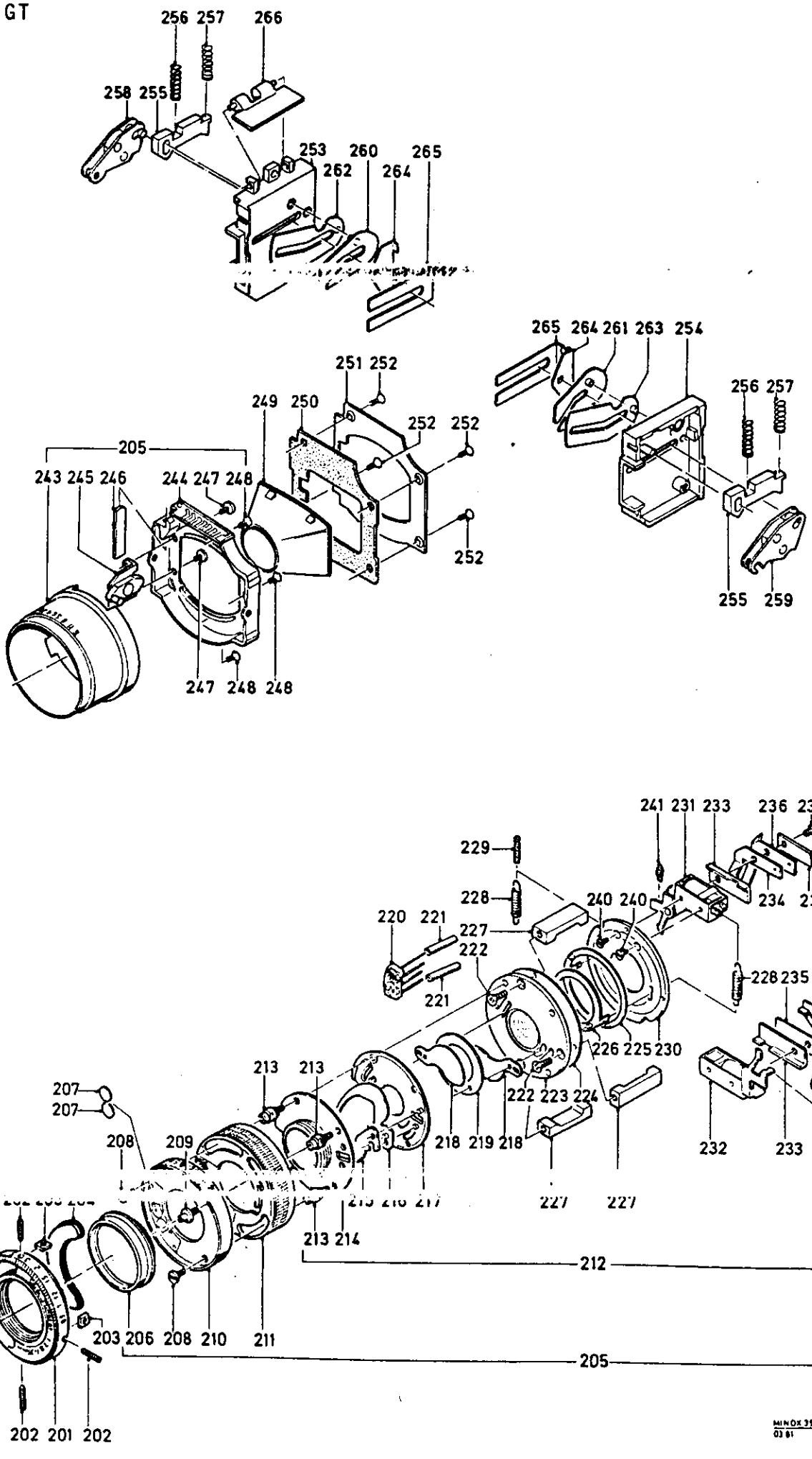
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Bild-Nr Fig no	Stck qty	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr / Part no / No. de piece / No de pieza
201	1	Metre scale, complete	10750 81000
	(1)	Feet scale, complete	10750 82000
	(1)	Distance ring	10750 50015
202	3	. Headless set screw M 1.4 x 6 mm	00000 20188
203	3	. Square nut M 1,4	10800 50005
204	1	Window	10750 50006
205	1	Lens, complete	10750 50000
206	1	. Front lens element	10750 80000
	(1)	. Front lens element	10800 80000
	1	. Disc	00000 31152
	1	. Corrugated ring	10750 50011
207	2	. Compensation filter 7 %	10800 50007
	(2)	. Compensation filter 10 %	10800 50020
	(2)	. Compensation filter 15 %	10800 50021
	(2)	. Compensation filter 20 %	10800 50022
	(2)	. Compensation filter 25 %	10800 50023
	(2)	. Compensation filter 30 %	10800 50024
	(2)	. Compensation filter 35 %	10800 50025
	(2)	. Compensation filter 40 %	10800 50026
	(2)	. Compensation filter 45 %	10800 50027
	(2)	. Compensation filter 50 %	10800 50028
	(2)	. Compensation filter 55 %	10800 50029
	(2)	. Compensation filter 60 %	10800 50030
	(2)	. Compensation filter 65 %	10800 50031
	(2)	. Compensation filter 70 %	10800 50032
	(2)	. Compensation filter 75 %	10800 50033
	(2)	. Compensation filter 80 %	10800 50034
	(2)	. Compensation filter 85 %	10800 50035
208	2	. Screw, fillister M 1.4 x 2 mm	10800 50003
209	1	. Butt screw	10800 50002
210	1	. Depth or focus control ring, complete	10750 78000
211	1	. Aperture control ring, complete	10750 79000
212	1	. Shutter, complete	10750 72000

Bild-Nr Fig no	Stck qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr./Part no./ No. de piece / No de pieza
213	3	. . Threaded insert	10800 72003
214	1	. . Central lens element, complete	10750 71000
215	1	. . Diaphragm leaf II	10750 72002
216	1	. . Diaphragm leaf I	10750 70000
218	3	. . Shutter leaf, thick 0.03 mm *	10750 72001
	(2)	. . Shutter leaf, thick 0.05 mm *	10800 72001
219	2	. . Filler	10800 72006
220	1	. . Photo resistor, complete	10800 68000
221	2	. . Insulating tubing	10800 78020
222	3	. . Screw, countersunk machine ■ M 1.4 x 4 mm	00000 30108
223	1	. . Achromatic lens, complete	10750 63000
224	1	. . Sliding disc	10800 64010
225	1	. . Switch disc I	10800 61000
226	1	. . Switch disc II	10800 62000
227	3	. . Base	10800 64004
228	2	. . Tension spring, 85 p, copper	10800 64003
	(2)	. . Tension spring, 110 p, silver	10800 64005
229	1	. . Stop buffer	10800 55003
230	1	. . Filler base	10800 57200
231	1	. . Magnet I, complete	10800 53200
232	1	. . Magnet II, complete	10800 53100
233	2	. . Insulating plate	10800 54001
234	1	. . Contact spring I	10800 54005
235	1	. . Contact spring II	10800 54002
236	1	. . Adjuster plate	10800 54004
237	2	. . Printed circuit board	10800 54003
238	1	. . Screw, fillister M 1.4 x 2 mm	00000 30097
239	1	. . Screw, fillister M 1.4 x 1.8 mm	00000 20181
240	4	. . Screw, countersunk machine M 1.4 x 1.6 mm	00000 30095
241	2	. . Tension spring 1.5 ø x 3.5 mm	10800 55002
242	1	. . Diode S 6 C or similar	10800 78021
	S	. . Diode S 6 C	00000 36015

* In this connection please observe the Service Bulletin no. 2, Point 8.

S = Substitute

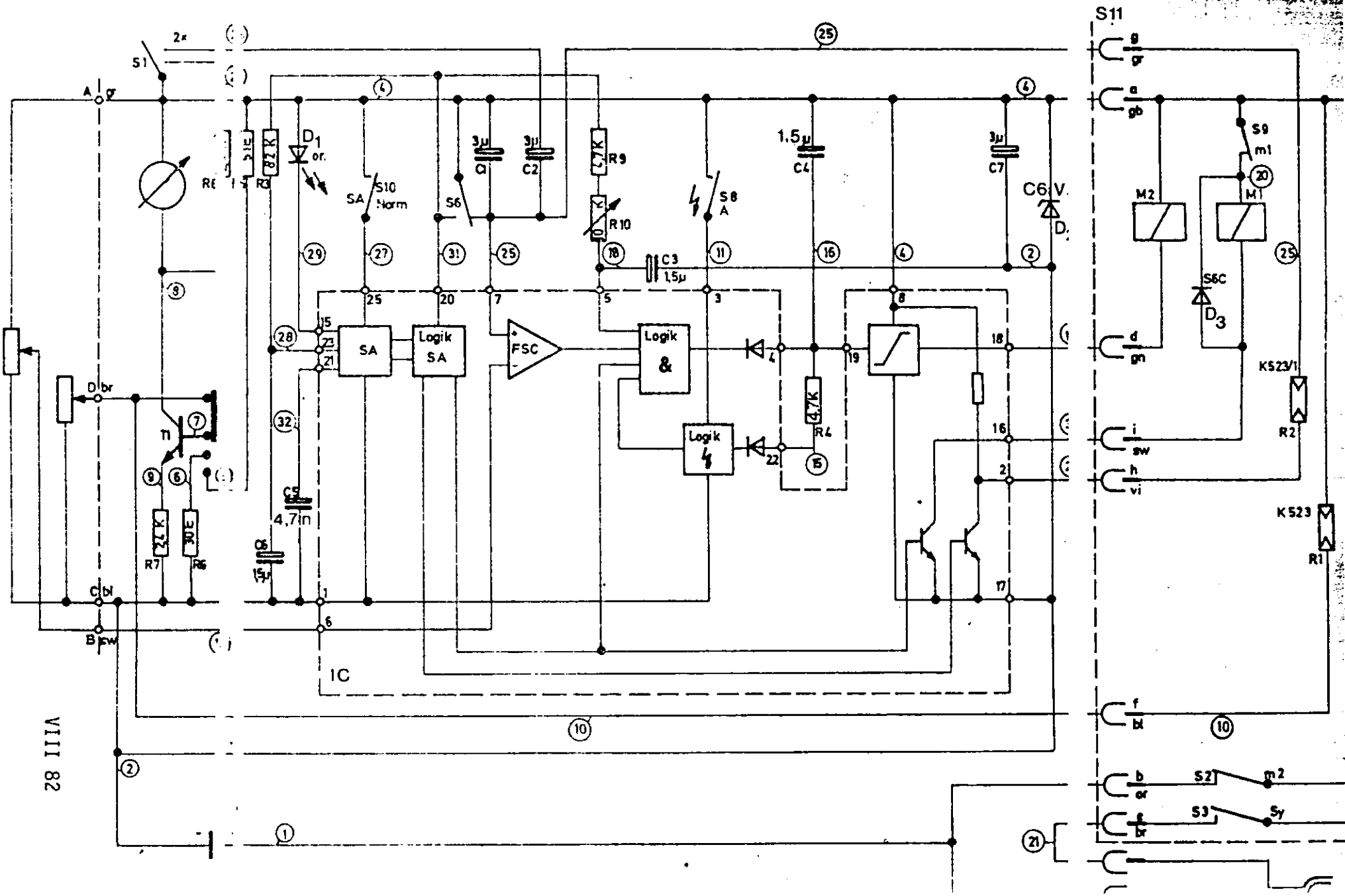
Bild-Nr Fig no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion	Teil-Nr./Part no./ No. de piece / No de pieza
243	1	. Lens barrel	10750 78001
244	1	. Light cover, riveted	10750 76000
245	1	. Retainer clip, complete	10800 75000
246	1	. Winder shaft	10800 78002
[illegible]	[illegible]	. [illegible]	[illegible]
	2	. Disc	00000 31113
248	3	. Screw, countersunk machine M 1,4 x 2 mm	10800 78003
249	1	Light funnel	10750 36013
250	1	Cover plate	10800 76003
251	1	Retainer plate	10800 76004
252	4	Screw, countersunk machine ■ M 1.4 x 2,5 mm	00000 30099
253	1	Pivot hinge, right	10750 26005
254	1	Pivot hinge, left	10800 26003
255	2	Catch lever	10800 26008
256	2	Pressure spring, copper	10800 26015
257	2	Pressure spring	10800 26009
258	1	Pivot, right	10850 22000
259	1	Pivot, left	10850 23000
260	1	Cover leaf I, right	10800 24000
261	1	Cover leaf I, left	10800 25000
262	1	Cover leaf II, right	10800 27000
263	1	Cover leaf II, left	10800 28000
264	2	Cover slide	10800 26006
265	2	Cover strip	10800 26007
266	1	Winder flap	10800 26010

Bild-Nr Fig no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion		Teil-Nr./Part no./ No. de piece / No de pieza
		Electronic Components		
13	1	Printed circuit board, complete		10750 19000
IC	1	. IC, curved		10750 16001
T1	1	. Transistor BCW 60 C or similar		00000 36264
D1	1	. LED, orange, CQX 43 N or similar		10750 16008
	(1)	. Resistor 2.4 kOhm		00000 36257
	(1)	. Resistor 2.7 kOhm		00000 36185
D2	1	. Z diode ZPD 6.2 or similar		10750 16006
	S	. Z diode ZPD 6.2 or similar		00000 36233
R3	1	. Resistor 82 kOhm		00000 36315
R4	1	. Resistor 4.7 kOhm		00000 36380
	(1)	. Resistor 33 kOhm *		00000 36225
	(1)	. Resistor 30 kOhm *		00000 36189
R5	1	. Resistor 51 Ohm		00000 36181
R6	1	. Resistor 30 Ohm		00000 36180
R7	1	. Resistor 2.4 kOhm		00000 36257
R8	1	. Resistor 2.4 kOhm		00000 36357
C1	1	. Tantalum capacitor 3 µF/6.3 V		00000 36328
C2	1	. Tantalum capacitor 3 µF/6.3 V		00000 36328
C3	1	. Tantalum capacitor 1.5 µF/6.3 V		00000 36402
C4	1	. Tantalum capacitor 1.5 µF/6.3 V		00000 36207
	(1)	. Tantalum capacitor 0.1 µF/6.3 V *		00000 36384
C5	1	. Capacitor 4.7 nF		00000 36390
	(1)	. Tantalum capacitor 1.5 µF/6.3 V *		00000 36207
C6	1	. Tantalum capacitor 1.5 µF/6.3 V		00000 36207
C7	1	. Tantalum capacitor 3 µF/6.3 V		00000 36403
a	1	. Flex, yellow, 45 mm long	gb	10750 04004
b	1	. Flex, orange, 28 mm long	or	10750 04005
e	1	. Flex, brown, 34 mm long	br	10750 04009
c	1	. Flex, green, 33 mm long	gr	10750 04007
f	1	. Flex, blue, 42 mm long	bl	10750 04012
g	1	. Flex, gray, 41 mm long	gr	10750 04010
h	1	. Flex, violett, 42 mm long	vi	10750 04011
i	1	. Flex, black, 38 mm long	sw	10750 04006
		* Only for IC up to no. 8123.		

S = Substitute

Bild-Nr. Fig no	Stck. qty.	Teilebezeichnung / Part name Designation / Designacion		Teil-Nr. / Part no. / No. de piece / No de pieza
A	1	. Flex, gray, 120 mm long	gr	10800 12032
B	1	. Flex, black, 122 mm long	sw	10800 12030
C	1	. Flex, blue, 116 mm long	bl	10850 12031
D	1	. Flex, brown, 143 mm long	br	10850 12033
	1	. Flex, battery -, blue, 28 mm long		10800 12035
	1	. Flex, R 10, orange, 36 mm long		10750 04013
R 9	1	Resistor 4.7 kOhm		00000 36380
R10	1	Trim resistor 10 kOhm		00000 36324
	1	Lens, complete		10750 50000
R1,R2	1	. Photo resistor, complete		10800 68000
M 1	1	. Magnet I		10800 53200
M 2	1	. Magnet II		10800 53100
D 3	1	. Diode S 6 C or similar		10800 78021
	S	. Diode S 6 C or similar		00000 36015
a	1	. Flex, yellow, 33 mm long	gb	10800 78010
b	1	. Flex, orange, 46 mm long	or	10800 78016
e	1	. Flex, brown, 43 mm long	br	10800 78011
d	1	. Flex, green, 55 mm long	gn	10800 78013
f	1	. Flex, blue, 35 mm long	bl	10800 78014
g	1	. Flex, gray, 33 mm long	gr	10800 78012
h	1	. Flex, violett, 56 mm long	vi	10750 78009
i	1	. Flex, black, 33 mm long	sw	10800 78015
	1	. Flex, M 1 - M 2, black 38 mm long		10800 78017
	1	. Flex, M 1 - M 2; yellow, 38 mm long		10800 78019

MINOX 35GT Circuit diagram



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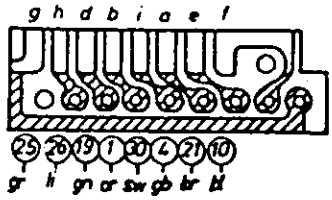
Switching Functions:

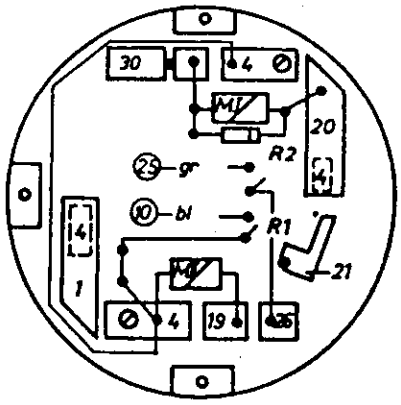
S 1 Counter light switch (2x slide, Fig. 4)
S 2 Contact breaker m_2 (switch disc II, Fig. 226)
S 3 Flash contact (on filler base, Fig. 226)
S 4 Battery check (pressure over push button, Fig. 3, on printed circuit board Fig. 13)
S 5 DIN-ASA switch for exposure meter (resistor plate, Fig. 142)
S 6 Shutter release switch (sliding switch, Fig. 124)
S 7 DIN-ASA switch for shutter (resistor plate, Fig. 142)
S 8 Commutator for automatic-flash exposure time (flash switch, Fig. 14
S 9 Contact breaker m_1 (switch disc I, Fig. 225)
S 10 Self timer switch (sliding switch T, Fig. 5)
S 11 Main switch (light cover, Fig. 244 - viewfinder, Fig. 17)

Switchings x = contact closed	S 2	S 3	S 6 a	S 6 b	9	S 11
Camera wound up, front flap closed	x			x	x	
Camera wound up, front flap open	x			x	x	x
Camera released		x	x			x

Terminals and measuring pints

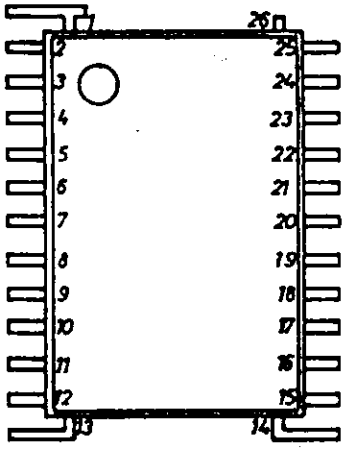
Lens, Part no. 10750 50000, Fig. no. 205





Semiconductor

IC

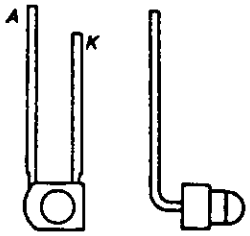


Part no.

10750 16001

D 1

LED



Part no.

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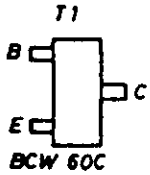
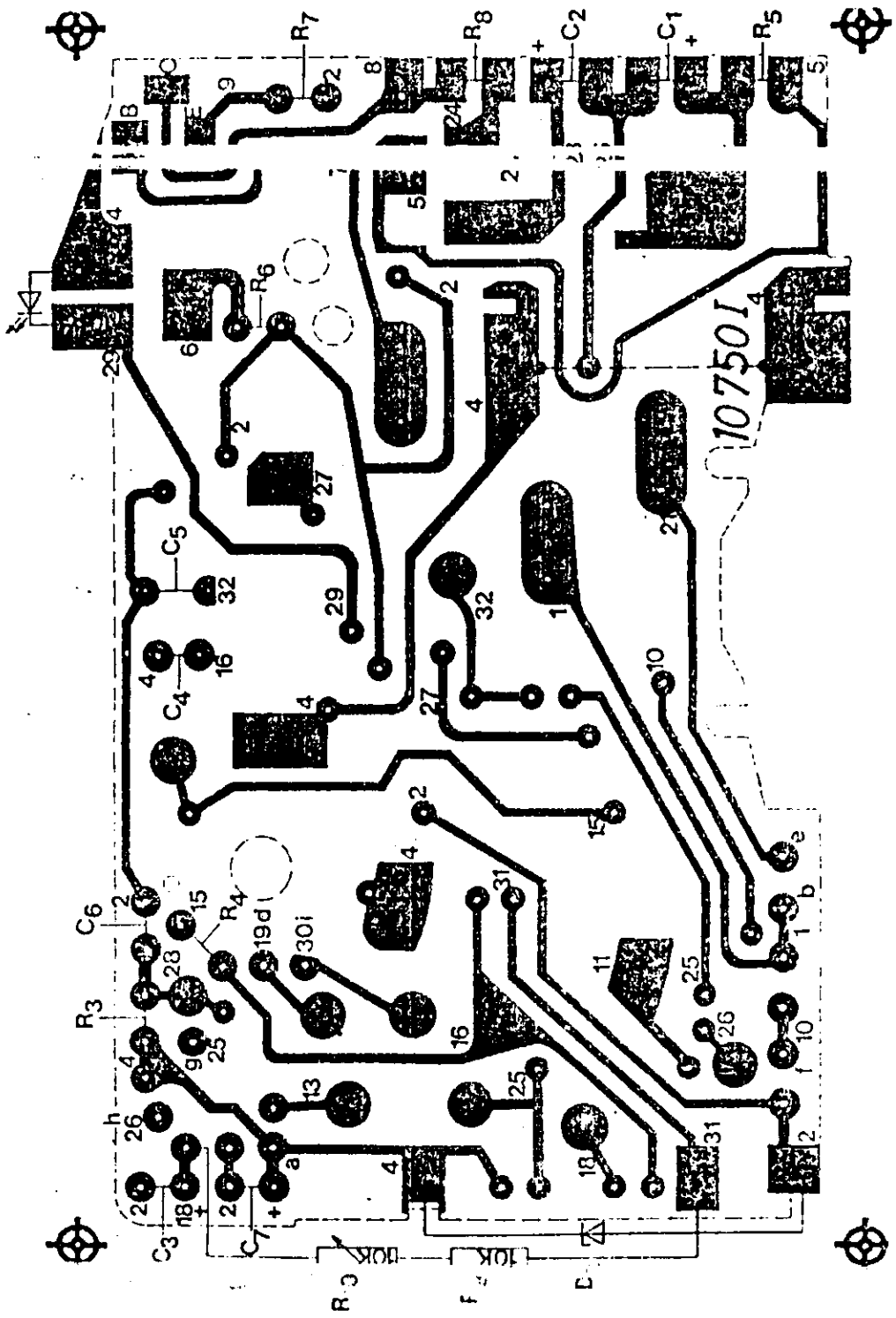


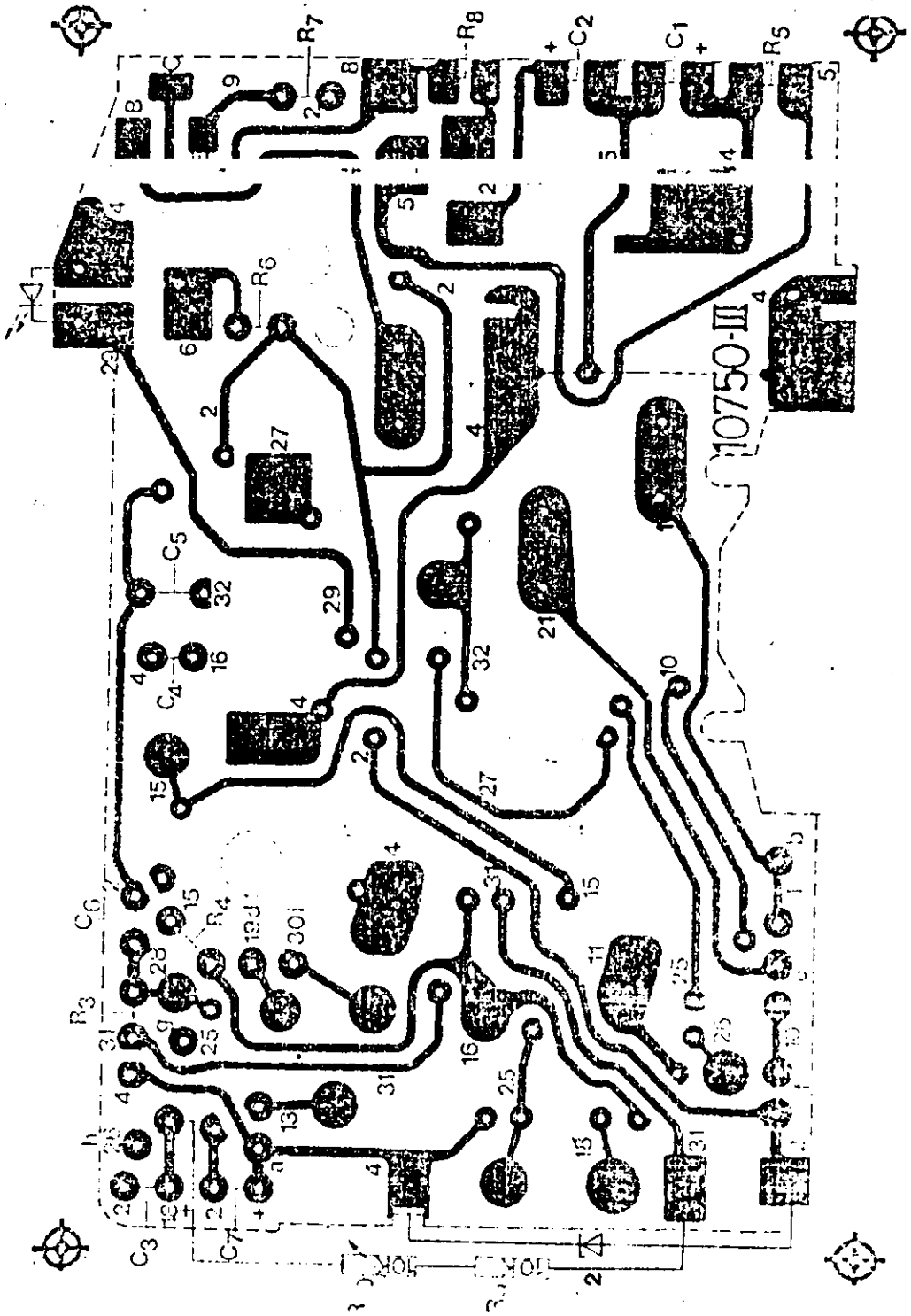
Part no.

00000 36264

Printed circuit I, Part no. 10750 19000, Fig. no. 13



Printed circuit III, Part no. 10750 19000, Fig. no. 13



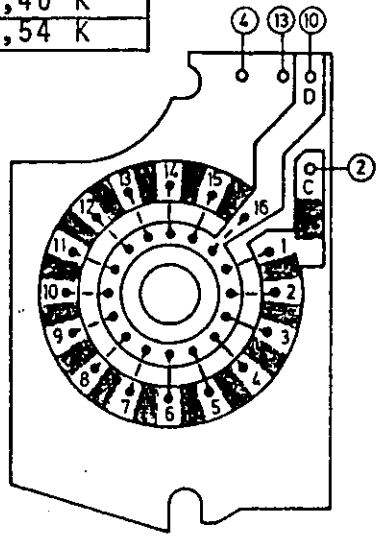
Slider position	R_t	R_s
1	,31 K	2,31 K
2	,60 K	290 Ω
3	,91 K	310 Ω
4	,26 K	350 Ω
5	,66 K	400 Ω
6	,12 K	460 Ω
7	,63 K	510 Ω
8	,24 K	610 Ω
9	,91 K	670 Ω
10	,66 K	750 Ω
11	,54 K	880 Ω
12	,54 K	1,00 K
13	,64 K	1,10 K
14	,84 K	1,20 K
15	,24 K	1,40 K
16	,78 K	1,54 K

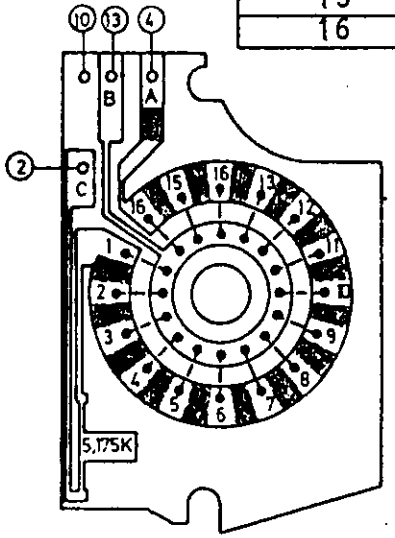
R_t = Total resistance

R_s = Single resistance

Slider position	R_t	R_s
1	4,974 K	769 Ω
2	4,205 K	692 Ω
3	3,513 K	601 Ω
4	2,912 K	516 Ω
5	2,396 K	440 Ω
6	1,956 K	364 Ω
7	1,592 K	303 Ω
8	1,289 K	247 Ω
9	1,042 K	01,5 Ω
10	840,5 Ω	64,7 Ω
11	675,8 Ω	32,2 Ω
12	543,6 Ω	06,7 Ω
13	436,9 Ω	85,6 Ω
14	351,3 Ω	68,9 Ω
15	282,4 Ω	54,3 Ω
16	228,1 Ω	28,1 Ω

Exposure meter side





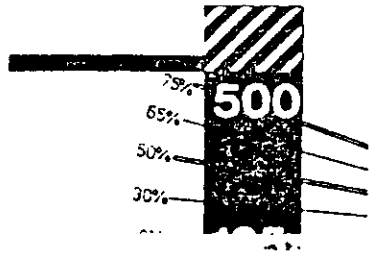
Shutter speed side

Slider position 1 = 15° DIN = 25 ASA

MINOX 35 GT Testing Programme

1. Basic Measurement

O	L	R_i	ASA	f-no	t_a ms	expo 1/sec
A	M	27	50	2,8	4 - 32	
A	M	27	200	2,8		125-500



2. Filter Selection (from basic measurement)

a) for exposure meter

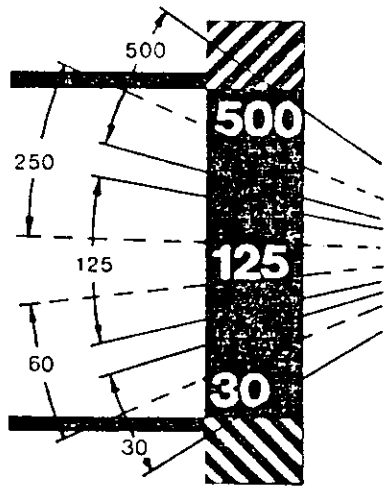
b) for automatic

t_a ms	F %	t_a ms	F %	t_a ms	F %	t_a ms	F %
4,0 - 5,6	85	10,5 - 12,0	65	16,9 - 18,4	45	23,3 - 24,8	25
5,7 - 7,2	80	12,1 - 13,6	60	18,5 - 20,0	40	24,9 - 26,4	20
7,3 - 8,8	75	13,7 - 15,3	55	20,1 - 21,6	35	26,5 - 28,0	15
8,9 - 10,4	70	15,4 - 16,8	50	21,7 - 23,2	30	28,1 - 32,0	0

3. Final Measurement

O	L	R_i	ASA	f-no	t_t ms	$expo_{nom}$ 1/sec
A	M	27	50	2,8	26-28	
A	M	27	50	4		< ////
T	M	27	100	4	22-44	30
A	M	27	400	4		125
A	H	27	800	4	2,8-4,5	> ////
A	H	27	200	4	3,2-4,5	500
2x	H	27	200	4		250
2x	D	27	800	11	280-700	
A	D	27	800	11	140-350	
ϟ		27			4-13	
B						125

Tolerances for exposure meter indicator



4. Key

a) O = mode of operation
- A = automatic
- T = timer swiched on
- 2x = counterlight switch on
- ϟ = flash exposure time
- B = battery check

b) L = Light, colour temparature = 4700° K

	cd/m²	ftlmb	asb
H	700,0	204,0	2200,0
M	87,5	25,5	274,0
D	10,9	3,2	34,3

c) R_i = internal resistance of power for U = 5,4 V

d) f-no = f-number to be set at this measurement

e) t_a = actual shutter speed

f) t_t = permissible range of shutter speed (tolerance)

g) $expo_{nom}$ = nominal exposure meter indicator in viewfinder

h) F = density of the compensation filter in %

Lubrication

The following lubricants must be used:

Losoid L 2 A special grease

Losoid 1150 D special grease

KSB 8 grease

Use only the grease brands given above. Grease only the points given below. Spread only a very thin film of grease on the greasing points.

Grease point	Lubricant L 2 A	1150 D	KSB 8
Smooth surface between spool take-up cam (Fig. 41) and body (Fig. 101)		x	
Smooth surface between conical spring washer (Fig. 113) and body (Fig. 101)	x		
All fastening openings in the body (Fig. 101) - bind the chips		x	
Smooth surface between winder pin (Fig. 109) and body (Fig. 101)		x	
Smooth surface between the pivot hinges (Fig. 253/254) and catch lever (Fig. 255) and the pivots (Fig. 258/259)			x
Smooth surface between sleeve (Fig. 131) and drive plate (Fig. 133)		x	
Smooth surface between cogwheel (Fig. 137) and drive plate (Fig. 133)			x
Stop surface between latch pin (Fig. 149) and drive cover (Fig. 150)			
Thread between front lens element (Fig. 206) and central lens element (Fig. 214)			x
Smooth surface between feet/metre scale (Fig. 201) and focus depth control ring (Fig. 210)		x	

MINOX 35 GT

Type 10750

Wz/Jo February 1982

Service Bulletin No. 1

Defective IC's, Part No. 10750 16001

1. Fault description

Defective IC's are usually due to a low-resistance junction between measuring point 30 and measuring point 21 (printed circuit board III, page 25) or measuring point 1 (printed circuit board I, page 24). The low-resistance junction arises between the leg spring, Part No. 10750 17002 (Fig. No. 15) and solder point 30. The leg spring actuates the flash switch, Part No. 10750 19000 (Fig. No. 14) which is in contact with the flash lug of the body cap (Fig. No. 1) (measuring point 21 or 1). The danger of such a low-resistance junction grows as the height and/or width of the solder point increases.

2. Fault sequence

With the electronic flash unit switched on and mounted, its firing voltage (which differs depending on the type of flash unit and its make) is applied to the flash lug. When the above-described short circuit occurs between measuring points 30 and 21 (circuit diagram on page 21), this firing voltage gets, firstly, from the flash lug to the collector and, secondly, from the centre contact to the emitter of the output transistor which controls magnet 1. If the camera is now triggered, the output transistor switches through and there is an abrupt discharge of the firing capacitor through the collector-emitter section of the output transistor. This discharge is so fast that, when the synchronous contact (S 3) closes, the firing voltage at the firing capacitor has already dropped off to such an extent that the flash unit is no longer fired. Depending on the magnitude of the firing voltage, after a certain number of camera releases, there is a breakdown of the collector-emitter section of the output transistor with the result that, immediately after the voltage is applied to the printed circuit board, magnet 1 pulls in and the shutter is opened.

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Telex 482986 minox d

3. Fault detection

The following owner complaints usually point to the fault described in Section 1:

a) Shutter opens when setting (only with battery).
b) Shutter opens when inserting the battery.
c) Shutter opens when opening the front flap (only with battery).
d) Electronic flash unit is not fired.
e) The shutter does not operate with the flash unit mounted.

4. Fault elimination

a) Remove the body cap (Fig. No. 1) and flash switch (Fig. No. 14) with leg spring (Fig. No. 13) from the camera.
b) Insulate solder point 30 with a thin, smooth, self-adhesive strip (size approx. 6 x 6 mm). The strip (e.g. Sellotape) should be fixed in such a way that one side is in direct contact with the bearing pin for the flash switch (important!).
c) Re-mount the flash switch. The flash switch must now, when it is actuated, glide on one side on the strip. This is necessary so that the strip is not pushed away when the flash switch is actuated.
d) Install a new, modified leg spring, Part No. 10750 17002 and fasten to the flash switch. Ten of these new springs are enclosed as a specimen with this service bulletin. Please plan your requirement of this spring and give us your order.
e) Mount the body cap and test the shutter as well as synchronization of the camera.

5. Preventive fault elimination

On the basis of the fault sequence described in Section 2 we advise you to eliminate the fault (Section 4) as a general rule whenever you carry out repairs on the MINOX 35 GT.

MINOX 35 GT Type 10750

Wz/Hf August 1982

Service Bulletin No. 2

1. Light leakage through the tripod screw thread

The seal, Fig. No. 134, is no longer used with the new body. The new body is no longer counterbored where previously the seal was inserted. In place of the seal, the sealing washer Part No. 00000 31150 is then to be used.

2. LED glows continuously

This fault and the increased current consumption which results can be remedied by soldering in a resistor of between 2.4 and 2.7 k Ω in parallel to the LED.

3. Current consumption of the camera

The current consumption of the Minox 35 GT when it is wound up may not exceed I = 7 mA with a voltage of U = 5.4 V and its internal resistance of R_i = 16 Ω. The current consumption is to be measured using a multimeter or ammeter with internal resistance R_i = 50 k Ω/V. If the current consumption of the camera is greater than this, possible causes are as follows:

a) LED glows continuously - see Point 2.

b) The zener voltage of the Z-diode is less than the battery voltage and thus allows a current to flow continuously. The first cameras were fitted with a Z-diode with a nominal voltage U = 5.6 V, for which this fault can occur. Replace with Z-diode with a rated voltage U = 6.2 V. In the meantime, the Z-diode with rated voltage U = 6.2 is fitted in every camera as standard.

c) Defective IC. Replace IC.

Caution In general, whenever the IC is replaced, the Z-diode D2 is also to be replaced.

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4. New IC

Since the autumn of 1981, a new, improved IC has been installed. It can only be identified by the date of manufacture. The date of manufacture is shown by the lower row of digits printed on the IC. The first 2 digits give the year of manufacture and the second 2 digits state the week of manufacture.

Example: 8210 = Year of manufacture 1982, 10th week

C A U T I O N

Old IC - up to and including No. 8123

New IC - as from No. 8124

The new IC can replace the old IC but not the other way round.

With the introduction of the new IC, the electronic controls could be further optimized. The values of the following components were modified:

Resistor R 4 changes from 33 k Ω to 4.7 k Ω.

Capacitor C 4 changes from 0.1 µF to 1.5 µF.

Capacitor C 5 changes from 1.5 µF to 4.7 nF.

5. Defective flash exposure time

With the old IC's (for definition of old and new IC's, see Point 4) the flash exposure time is determined by the RC combination 33 k Ω (R4) and 0.1 µF (C4). If with these values the flash exposure time cannot be guaranteed, R 4 is to be reduced to 30 k Ω.

6. New crank arm latching mechanism

The latching action of the crank arm (Fig. No. 46) has been improved by use of the rewind cam, Part No. 10750 12124, and the stop spring, Part No. 10750 13101.

C A U T I O N

The new stop spring, Part No. 10750 13101, can only be used in combination with the new rewind cam. Part No. 10750 12124.

The old stop spring, Part No. 10750 13001, can only be used in combination with the old rewind cam, Part No. 10750 12024.

7. Increased length of tripod screw thread

The drive plate, Part No. 10750 36106, has been provided with a longer tripod screw thread which penetrates deeper into the body back.

C A U T I O N

The new drive plate, Part No. 10750 36106 can only be used in combination with the new body back, Part No. 10750 43100.

The old drive plate, Part No. 10750 36006, can only be used in combination with the old body back, Part No. 10750 43000.

If this is not observed, light will leak in through the body back!

3. Shutter now has 3 leaves

The shutter is now equipped with 3 shutter leaves, whereby their thickness has been reduced from 0.05 mm to 0.03 mm. The thinner shutter leaves have the Part No. 10750 72001.

The fitting sequence of the three-leaved shutter is:

a) Hook in 1st shutter leaf

b) Insert 1st filler (Fig. No. 219)

c) Hook in 2nd shutter leaf on the opposite side

d) Insert 2nd filler

e) Hook in 3rd shutter leaf on the same side as the 1st shutter leaf.

Light leakage through the shutter leaves is eliminated by the three-leaf shutter.

C A U T I O N

When repairing older shutters, the three-leaf shutter shall only be installed if there is a leakage of light through the shutter leaf. For the 2-leaf shutter use only shutter leaf Part No. 10800 72001, and for the three-leaf shutter only the shutter leaf Part 10750 72001.

9. New front lens element

The new front lens element (Fig. No. 206) has the Part No. 10750 80000 and can be identified in that the front lens element mount no longer has T-slots. In order to achieve speedy adjustment, one each of a ring Part No. 00000 31152 and a corrugated ring Part No. 10750 50011 are to be inserted.

10. Light leakage through the cable penetration into the film cassette compartment

In order to prevent light leakage, the light-trap plate, Part No. 10730 12001 is to be inserted between rewind cam (Fig. No. 44) and body (Fig. No. 101). For older cameras (old body design) the light-trap plate cannot be fitted, in which case the cable penetration is to be sealed with blanking wax.

11. Metre or feet scale jams at the infinity setting

If this fault occurs, the spacer, Part No. 10750 50015 is to be inserted between the metre or feet scale (Fig. No. 201) and the front lens element (Fig. No. 206).

12. Revisions of the repair and spare parts list

Please insert the enclosed pages of the repair and spare parts list, Issue VIII 82, in place of the older issues and destroy these.

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The following revisions were made:

a) Page 4: Changes in Fig. No. 9 and 24.
b) Page 5: Changes in Fig. No. 44, 45 and 57.
c) Page 10: Changes in Fig. No. 133, 134, 135, 142, 143 and 153.
d) Page 13: Changes in Fig. No. 201, 206, 207 and new layout of text.
e) Page 14: Changes in Fig. No. 214, 217, 218, 219 and new layout of text.
f) Page 15: Changes in Fig. No. 247 and new layout of text.
g) Page 17: Changes in D1, D2, R4, C3, C4, C5, C7 and e.
h) Page 18: New layout of text.
i) Page 21: Changes in C4, C5, D2 and R4.
j) Page 24: Z diode changed from C5V6 to D2.
k) Page 25: Z diode changed from C5V6 to D2.